

## Description

# *HANDHELD RETRACTABLE PULL-THROUGH KNIFE SHARPENER*

### CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims the benefit of the filing date of co-pending U.S. Provisional Application No. 60/438,919, filed January 9, 2003.

### BACKGROUND OF INVENTION

[0002] The present application relates generally to hand-held kitchen knife sharpeners and, more particularly, to a hand-held, retractable, pull-through type knife sharpener.

[0003] Kitchen knives require periodic maintenance to ensure that the knife edge remains sharp to promote more productive cutting. It is known that a knife edge can be sharpened by repetitively pulling the knife blade through a knife sharpener consisting of a slot with at least two sharpening members made of a hardened material, such as ceramic, and angled relative to each other to form a V-shaped groove through which the knife edge is designed

to pass. By maintaining an appropriate angle between the sharpening members, simultaneous sharpening of both sides of the knife edge is facilitated with minimal effort when the knife is pulled therebetween. However, there exists a need to maintain and protect the sharpening members during nonuse and storage.

#### **SUMMARY OF INVENTION**

[0004] The present application discloses a new and improved knife sharpening apparatus with a retractable, V-shaped, pull-through knife sharpener housed within a handle. The handle comprises a housing and a slideable sled. The sled is slideably received inside the housing. The sled further incorporates a pull-through type knife sharpener. As such, when the sharpener's use is not required, the sled can be retracted inside of the handle, thus protecting the surfaces of the sharpening members. When use of the pull through sharpener is desired, the user simply extends the sled from the handle to expose the sharpener. The sled can then be retained in place with a retaining mechanism during the sharpening process.

#### **BRIEF DESCRIPTION OF DRAWINGS**

[0005] For the purpose of facilitating an understanding of the

subject matter sought to be protected, there is illustrated in the accompanying drawings an embodiment thereof, from an inspection of which, when considered in connection with the following description, the subject matter sought to be protected, its construction and operation, and many of its advantages, should be readily understood and appreciated.

- [0006] FIG. 1 is a side elevational view of a retractable pull-through knife sharpener of the present application with the sharpener depicted in a retracted position;
- [0007] FIG. 2 is a side elevational view of the retractable pull-through knife sharpener of FIG. 1 with the sharpener depicted in an extended position;
- [0008] FIG. 3 is a side elevational view of the sled of the present application removed from the handle for clarity;
- [0009] FIG. 4 is a longitudinal cross-sectional view of the retractable pull-through knife sharpener of FIG. 2; and
- [0010] FIG. 5 is a longitudinal cross-sectional view of the retractable pull-through knife sharpener of FIG. 1.

#### **DETAILED DESCRIPTION**

- [0011] Disclosed herein is an improved retractable pull-through type knife sharpener apparatus. Referring to the figures, a sharpener 10 includes a handle 20 with a housing 21 hav-

ing an internal hollowed portion 21a and an opening 21b at one end and an outer surface of an ergonomically efficient design to optimize hand-held use of the sharpener 10. The handle 20 may also include an over-molded portion 22 made of a grip-enhancing material.

[0012] A sled 30 is provided with a size and shape to be slideably received within the hollowed portion of the housing 21 through the opening. The sled 30 includes a pull-through type sharpening structure consisting of an elongated slot 31 terminating with a plurality of sharpening members 32 situated relative to each other to form a substantially V-shaped groove. The sharpening members 32 may be ceramic rods. It is anticipated that the sharpening structure be used in a manner well known to receive the cutting edge of a knife blade, whereupon the knife blade is pulled through the slot 31 to contact the sharpening members 32. When the knife blade is pulled through the slot 31 in this manner, simultaneous sharpening of both sides of the knife blade edge occurs. This ensures even and effective sharpening of the knife blade and maintenance of the proper angle of the blade edge. As depicted in FIG. 2, the sled 30 is in an extended position exposing the sharpening structure for use.

[0013] The sled 30 may also comprise a retaining mechanism 33 (FIGs. 3 and 4) on its inner end for retainable engagement with the housing 21 when the sled 30 is slideably extended from the housing 21 hollowed portion. Placement of the retaining mechanism 33 defines the longitudinal limits of the sliding travel of the sled 30 relative to the housing 21. The sled 30 may therefore be retained in either an extended position, exposing the sharpening structure relative to the housing 21, or a retracted position, wherein the sharpening structure is enclosed within the housing 21 to facilitate storage. The retaining mechanism 33 may be a resilient member extending from the sled 30 and with a detent structure 34, such as a recess, disposed thereon.

[0014] The sled 30 may further comprise sled guides 35, 36 for guiding the sled 30 in the housing 21. Sled guide 35 may be accessible to the user through an aperture 35a in the housing 21 to facilitate disengagement of the retaining mechanism 33 when the user applies minimal longitudinal force and subsequently slides the sled 30 to a desired position relative to the housing 21.

[0015] Referring to FIG. 4, the sled 30 is depicted in an extended position exposing the sharpening structure for use. The

recess 34 may engageably receive complementary detent projections 38 (one shown in FIG. 5) for resiliently retaining the sled 30 in its retracted and extended positions.

[0016] Referring to FIG. 5, the sled 30 is depicted in a retracted position wherein the sharpening structure is housed within the housing 21. In this position, the sharpening structure can be stored and protected.

[0017] The matter set forth in the foregoing description and accompanying drawings is offered by way of illustration only and not as a limitation. While particular embodiments have been shown and described, it will be apparent to those skilled in the art that changes and modifications may be made without departing from the broader aspects of applicants' contribution. The actual scope of the protection sought is intended to be defined in the following claims when viewed in their proper perspective based on the prior art.